

SECTION 08 14 00
INTERIOR WOOD DOORS

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This section specifies interior flush doors with prefinish, prefit option.
- B. Section includes fire rated doors and sound retardant doors.

1.2 RELATED WORK

- A. Section 01 81 13, SUSTAINABLE DESIGN REQUIREMENTS for additional LEED requirements.
- B. Section 01 81 19, INDOOR AIR QUALITY REQUIREMENTS for VOC limit.
- C. Metal door frames: Section 08 11 13, HOLLOW METAL DOORS AND FRAMES.
- D. Door hardware including hardware location (height): Section 08 71 00, DOOR HARDWARE.
- E. Installation of doors and hardware: Section 08 11 13, HOLLOW METAL DOORS AND FRAMES, and Section 08 71 00, DOOR HARDWARE.
- F. Glazing: Section 08 80 00, GLAZING.
- G. Finish: Section 09 06 00, SCHEDULE FOR FINISHES.

1.3 QUALITY ASSURANCE

- A. Forest Certification for Wood: Provide materials produced from wood obtained from forests certified by an FSC-accredited certification body to comply with FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship." Companies that take legal ownership of FSC products and produce, sell, promote, or trade them must also be certified for chain of custody.

1.4 SUBMITTALS

- A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
- B. Samples:
 - 1. Veneer sample 200 mm (8 inch) by 275 mm (11 inch) by 6 mm (1/4 inch) showing specified wood species sanded to receive a transparent finish. Factory finish veneer sample where the prefinished option is accepted.
- C. Shop Drawings:
 - 1. Show every door in project and schedule location in building.
 - 2. Indicate type, grade, finish and size; include detail of glazing, sound gasketing and pertinent details.

3. Provide information concerning specific requirements not included in the manufacturer's literature and data submittal.

D. Manufacturer's Literature and Data:

1. Labeled fire rated doors showing conformance with NFPA 80.

E. Laboratory Test Reports:

1. Screw holding capacity test report in accordance with WDMA T.M.10.
2. Split resistance test report in accordance with WDMA T.M.5.
3. Cycle/Slam test report in accordance with WDMA T.M.7.
4. Hinge-Loading test report in accordance with WDMA T.M.8.

F. VOC content for Adhesives, Paints and Coatings: Manufacturers' product data for installation adhesives, paints and coatings applied onsite and inside the weatherproofing system, including printed statement of VOC content (in g/L).

G. Leed Submittals:

1. Credits MR 4.1 & 4.2: For products having recycled content, documentation indicating percentages by weight of post-consumer and pre-consumer recycled content.
 - a. Include statement indicating costs for each product containing recycled content.
2. Credit MR 7: Certificates of chain of custody signed by manufacturers certifying that products specified to be made of certified wood were made from wood obtained from forests certified by an FSC-accredited certification body to comply with FSC 1.2, "Principles and Criteria." Include evidence that mill is certified for chain-of-custody by an FSC-accredited certification body.
 - a. Include statement indicating costs for each wood based product.
3. Credit EQ 4.4:
 - a. Composite wood manufacturer's product data for each composite wood product used indicating that the bonding agent contains no urea formaldehyde.
 - b. Adhesive manufacturer's product data for each adhesive used indicating that the adhesive contains no urea formaldehyde

1.5 WARRANTY

- A. Doors are subject to terms of Article titled "Warranty of Construction", FAR clause 52.246-21, except that warranty shall be as follows:

1. For interior doors, manufacturer's warranty for lifetime of original installation.

2. Specified STC RATING for sound retardant rated door assembly in place.

1.6 DELIVERY AND STORAGE

- A. Factory seal doors and accessories in minimum of 6 mill polyethylene bags or cardboard packages which shall remain unbroken during delivery and storage.
- B. Store in accordance with WDMA I.S.1-A, J-1 Job Site Information.
- C. Label package for door opening where used.

1.7 APPLICABLE PUBLICATIONS

Publications listed below form a part of this specification to extent referenced. Publications are referenced in text by basic designation only.

- B. Window and Door Manufacturers Association (WDMA):

I.S.1-A-04	Architectural Wood Flush Doors
I.S.4-07A	Water-Repellent Preservative Non-Pressure Treatment for Millwork
I.S.6A-01	Architectural Wood Stile and Rail Doors
T.M.5-90	Split Resistance Test Method
T.M.6-08	Adhesive (Glue Bond) Durability Test Method
T.M.7-08	Cycle-Slam Test Method
T.M.8-08	Hinge Loading Test Method
T.M.10-08	Screwholding Test Method

- C. National Fire Protection Association (NFPA):

80-07	Protection of Buildings from Exterior Fire
252-08	Fire Tests of Door Assemblies

- D. ASTM International (ASTM):

E90-04	Laboratory Measurements of Airborne Sound Transmission Loss
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PART 2 - PRODUCTS

2.1 FLUSH DOORS

- A. LEED Requirements:

1. Recycled Content of Steel Products: Provide steel products with minimum 25% post-consumer recycled content.
2. Provide a minimum of 50 percent (by cost) of wood-based materials that are produced from wood obtained from forests certified by an FSC-accredited certification body to comply with FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship."

3. Do not use composite wood or agrifiber products or adhesives that contain urea-formaldehyde resin.

A. General:

1. Meet requirements of WDMA I.S.1-A, Extra Heavy Duty.
2. Adhesive: Type II.
3. Thickness: 45 mm (1-3/4 inches) unless otherwise shown or specified.

B. Face Veneer:

1. In accordance with WDMA I.S.1-A.
2. For transparent finishes: Premium Grade, rotary cut, maple as indicated in Section 09 06 00, SCHEDULE OF FINISHES and throughout the project unless scheduled or otherwise indicated on Drawings.
 - a. AA grade face veneer.
 - b. Match face veneers for doors for uniform effect of color and grain at joints.
 - c. Door edges shall be same species as door face veneer.
3. Factory sand doors for finishing.

C. Wood for stops, muntins and moldings of flush doors required to have transparent finish:

1. Solid Wood of same species as face veneer.
2. Glazing:
 - a. On non-labeled doors use applied wood stops nailed tight on room side and attached on opposite side with flathead, countersunk wood screws, spaced approximately 125 mm (5 inches) on centers.

D. Fire rated wood doors:

1. Fire Performance Rating:
 - a. "B" label, 1-1/2 hours.
 - b. "C" label, 3/4 hour.
2. Labels:
 - a. Doors shall conform to the requirements of ASTM E2074, or NFPA 252, and, carry an identifying label from a qualified testing and inspection agency for class of door or opening shown designating fire performance rating.
 - b. Metal labels with raised or incised markings.
3. Performance Criteria for Stiles of doors utilizing standard mortise leaf hinges:
 - a. Hinge Loading: WDMA T.M.8. Average of 10 test samples for Extra Heavy Duty doors.

- b. Direct screw withdrawal: WDMA T.M.10 for Extra Heavy Duty doors.
Average of 10 test samples using a steel, fully threaded #12 wood screw.
- c. Cycle Slam: 1,000,000 cycles with no loose hinge screws or other visible signs of failure when tested in accordance with WDMA T.M.7.
- 4. Additional Hardware Reinforcement:
 - a. Provide fire rated doors with hardware reinforcement blocking.
 - b. Size of lock blocks as required to secure hardware specified.
 - c. Top, bottom and intermediate rail blocks shall measure not less than 125 mm (five inches) minimum by full core width.
 - d. Reinforcement blocking in compliance with manufacturer's labeling requirements.
 - e. Mineral material similar to core is not acceptable.
- 5. Other Core Components: Manufacturer's standard as allowed by the labeling requirements.
- 6. Provide steel frame approved for use in labeled doors for vision panels.
- 7. Provide steel astragal on pair of doors.

2.2 PREFINISH AND PREFIT

- A. Flush doors shall be factory machined to receive hardware, bevels, undercuts, cutouts, accessories and fitting for frame.
- B. Factory fitting to conform to specification for shop and field fitting, including factory application of sealer to edge and routings.
- C. Flush doors to receive transparent finish (in addition to being prefit) shall be factory finished as follows:
 - 1. WDMA I.S.1-A Section F-3 specification for System TR-4, Conversion Varnish or System TR-5, Catalyzed Vinyl.

2.3 IDENTIFICATION MARK:

- A. On top edge of door.
- B. Either a stamp, brand or other indelible mark, giving manufacturer's name, door's trade name, construction of door, code date of manufacture and quality.
- C. Accompanied by either of the following additional requirements:
 - 1. An identification mark or a separate certification including name of inspection organization.
 - 2. Identification of standards for door, including glue type.
 - 3. Identification of veneer and quality certification.

4. Identification of preservative treatment for stile and rail doors.

2.4 SEALING:

- A. Give top and bottom edge of doors two coats of catalyzed polyurethane or water resistant sealer before sealing in shipping containers.

PART 3 - EXECUTION

3.1 DOOR PREPARATION

- A. Field, shop or factory preparation: Do not violate the qualified testing and inspection agency label requirements for fire rated doors.
- B. Clearances between Doors and Frames and Floors:
 - 1. Maximum 3 mm (1/8 inch) clearance at the jambs, heads, and meeting stiles, and a 19 mm (3/4 inch) clearance at bottom, except as otherwise specified.
 - 2. Maximum clearance at bottom of doors designated to be fitted with mechanical seal: 10 mm (3/8 inch).
- C. Provide cutouts for special details required and specified.
- D. Rout doors for hardware using templates and location heights specified in Section, 08 71 00 DOOR HARDWARE.
- E. Fit doors to frame, bevel lock edge of doors 3 mm (1/8 inch) for each 50 mm (two inches) of door thickness only undercut where shown to accommodate specific floor finishes and where approved by Architect.
- F. Immediately after fitting and cutting of doors for hardware, seal cut edges of doors with two coats of water resistant sealer.
- G. Finish surfaces, including both faces, top and bottom and edges of the doors smooth to touch.
- H. Apply a steel astragal on the opposite side of active door on pairs of fire rated doors.

3.2 INSTALLATION OF DOORS APPLICATION OF HARDWARE

- A. Install doors and hardware as specified in Section, 08 71 00 DOOR HARDWARE.

3.3 DOOR PROTECTION

- A. As door installation is completed, place polyethylene bag or cardboard shipping container over door and tape in place.
- B. Provide protective covering over knobs and handles in addition to covering door.
- C. Maintain covering in good condition until removal is approved by Resident Engineer.

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